

Claims

1. A device (10) for loading or unloading substrates (11) into or out of a clean room (12), having a lock device (14), on which a transport box (13) can be brought for receiving the substrates (11) and which is provided with a hermetically sealable lock opening (46), and having a processing installation (16) adjoining the lock opening (46), characterized in that an adapter device (20) is arranged between the processing installation (16) and the lock device (14), on which the lock device (14) can be releasably fastened and which is held on the processing installation (16) and can be adjustably oriented in respect to it.

2. The device in accordance with claim 1, characterized in that the adapter device (20) can be adjusted in height (Z-axis) in respect to the processing installation (16), and/or can be inclined in respect to a vertical axis (X-axis) and/or a horizontal axis (Y-axis), and/or is displaceable in one or both axes (X, Y).

3. The device in accordance with claim 1 or 2, characterized in that on its underside the adapter device (20) is connected with two spaced apart, height-adjustable forcing screws (27), which are held on a stationary element (26).

4. The device in accordance with at least one of the previous claims, characterized in that facing the processing installation (16), the adapter device (20) is provided with adjustable forcing screws (29), which are supported on a component

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of the processing installation (16).

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5. The device in accordance with claims 3 and 4, characterized in that by means of the forcing screws (27) the adapter device (20) is seated, displaceable longitudinally and/or transversely, on the element (26).

6. The device in accordance with at least one of the preceding claims, characterized in that the adapter device (20) can be fixed in place on the processing device (16) by means of fastening screws (35), which pass through bores (41) of larger diameter.

7. The device in accordance with at least one of the preceding claims, characterized in that the adapter device (20) is provided with spaced apart indexing pins (32), which can be fittingly and essentially free of play plugged into receiving bores (41) of the lock device (14).

8. The device in accordance with claim 7, characterized in that every lock device (14) has a base plate (40), which has a bore pattern corresponding to the arrangement of the indexing pins (32) in the adapter device (20).

9. A device, wherein the lock device (14) has a displaceable receiving table (45) for the transport box (13), in accordance with at least one of the preceding claims, characterized in that the lock device (14) has a roller track (75) in the area of the receiving table (45).

10. The device in accordance with claim 9, characterized in that the roller track (75) can be pivoted by preferably $\pm 90^\circ$

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around ~~a~~ vertical axis (82).

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11. The device in accordance with claim 9 or 10, characterized in that the roller track (75) is provided with vertically upward extending lateral insertion slopes (86).

12. The device in accordance with at least one of claims 9 to 11, characterized in that the roller track (75) is slightly inclined in the direction toward the processing installation (16) or toward a loading and unloading level (89) and has a stop (90).

13. The device in accordance with at least one of claims 9 to 12, characterized in that the roller track (75) is formed by two parallel track element (77), which extend on both sides of the receiving table (45) and which are connected by means of a hoop (79).

14. The device in accordance with claims 10 and 13, characterized in that the connecting hoop (78) is connected with a lever (79), whose other end is pivotably maintained on a vertical shaft (82).

15. The device in accordance with at least one of claims 9 to 14, characterized in that the roller track (75) can be raised and lowered in respect to the surface of the receiving table (45).

16. The device in accordance with claims 14 and 15, characterized in that the lever (79) or the pivot shaft (82) are displaceable in height.

17. A device, wherein the lock opening (46) of the lock device (14) can be hermetically sealed by means of a lock door

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(47), which can be connected with a cover (49) of the transport box (13), in accordance with at least one of the preceding claims,

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characterized in that the cover (49) is provided with two T-shaped keys, which can be rotated by means of a parallelogram drive maintained in the lock door (47).

18. The device in accordance with claim 17, characterized in that a clutch disk (97) is connected with the parallelogram drive, which is moved by a motor-driven worm gear.

19. The device in accordance with claim 17 or 18, characterized in that the parallelogram drive has a hinged connecting rod (99), from which a manual lever (101) projects, which is accessible from the outside.

20. The device in accordance with at least one of the preceding claims, characterized in that the closing movement of the lock door (47), the displacement movement of the receiving table (45) and the lowering movement of the roller track (75) are derived from a similar crank drive.

21. The device in accordance with claim 20, characterized in that the drive mechanisms for the closing movement of the lock door (47), for the displacement movement of the receiving table (45) and the lowering movement of the roller track (75) and the lock door (47) are arranged inside the lock device (14).